Richland

Public Works Department
February 24, 2005

Roby D. Enge,
Director, Environment, Safety and Health
Battelle Memorial Institute
P. O. Box 999
Richland, WA 99352

RE: RENEWAL OF INDUSTRIAL WASTEWATER PERMIT NO. CR-IU001

Dear Mr. Enge:

Battelle Memorial Institute's permit application for an industrial wastewater permit has been reviewed and processed in accordance with City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30.

The enclosed Permit No. CR-IU001 covers the wastewater discharged from identified Battelle facilities into the City of Richland sewer collection system. All discharges from these facilities, actions and reports relating thereto shall be in accordance with the terms and conditions of this permit.

If you wish to appeal or challenge any conditions imposed in this permit, a petition shall be filed with the Pollution Control Hearings Board for modification or reissuance of the permit in accordance with the requirements of City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 3.9, within 30 days of your receipt of this correspondence. Pursuant to Part 3.9, failure to petition for reconsideration of the permit within the allotted time is deemed a waiver by the permittee of this right to challenge the terms of the permit.

Sincerely,

Pete Rogalsky, P.E.
Public Works Director
City of Richland

Enclosures

Richland

CITY OF RICHLAND
INDUSTRIAL WASTEWATER DISCHARGE PERMIT
PERMIT NO. CR-IU001

In accordance with the provisions of City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30,

BATTELLE MEMORIAL INSTITUTE
P.O. BOX 999
MSIN J2-25
Richland, WA 99352

is hereby authorized to discharge industrial wastewater from the above-identified facilities and through the outfalls identified herein into the City of Richland sewer system in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards, or requirements under local, state, and federal laws, including any such regulations, standards, requirements, or laws that may become effective during the terms of this permit.

Non-compliance with any term or condition of this permit shall constitute a violation of the City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30.

This permit shall become effective on **March 1, 2005** and shall expire at midnight on **March 1, 2010.**

If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 3, Section 3.14, a minimum of 90 days prior to the expiration date.

By: _____
Pete Rogalsky, P.E.
Public Works Director

Issued: March 1, 2005

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PART I - WASTEWATER DISCHARGE LIMITATIONS

The permit limits are based on General and Specific National Prohibited Discharges, [40 CFR 403.5 (a) and (b)], and a combination of local and federal limits, whichever are more stringent. All pertinent data is on file in the City of Richland's industrial pretreatment office.

A. DESCRIPTION OF OUTFALLS

During the period the permit is effective, the permittee is authorized to discharge process wastewater to the City of Richland sewer system from the outfalls listed below:

Outfall	Description
001	Manhole L-268 located north of cleanout L-43 and west of Q Avenue. GPS Coordinates: 46.34837 N by 119.27656 W
002	Manhole L-83 located at intersection of 6th Street and W Avenue. GPS Coordinates: 46.34079 N by 119.27984 W
003	Manhole L-89 located west of Research Technology Laboratory (RTL 520) at 520 3rd Street. GPS Coordinates: 46.33717 N by 119.27602 W
004	Manhole L-51 located on 9th Street. GPS Coordinates: 46.34525 N by 119.26926 W
005	Manhole L-166 located north of the 2400 Stevens Building. GPS Coordinates: 46.33930 N by 119.27460 W
006	Manhole L-77, located on M Avenue, north of 5th Street. GPS Coordinates: 46.31976 N by 119.28200 W
007	Process Development Laboratory West (PDLW), at 580 5th Street.

Outfall 001 includes effluent discharged from the following locations:

Name of Facility	Location
Physical Sciences Laboratory	908 Battelle Boulevard
Engineering Development Laboratory	910 Battelle Boulevard
Research Operations Building	902 Battelle Boulevard
Life Sciences Laboratory II	900 Battelle Boulevard
Mathematics Building	906 Battelle Boulevard

Outfall 002 includes effluent discharged from the following locations:

Name of Facility	Location
Plant Growth Facility I (PGF1)	3080 W Avenue
Plant Growth Facility II (PGF2)	3080 W Avenue
Plant Growth Facility III (PGF3)	3080 W Avenue
Plant Growth Facility IV (PGF 4)	3080 W Avenue
Plant Growth Facility V (PGF 5)	3054 Einstein Avenue
Annex	770 6th Street
Receiving and Shipping Warehouse	790 6th Street
Bird Aviary	North 3060 W Avenue

Outfall 003 includes effluent discharged from the following locations:

Name of Facility	Location
Research Technology Laboratory (RTL 520)	520 3rd Street
Chemical Process Development Laboratory (RTL 570)	570 3rd Street
Utility Building (RTL 560)	560 3rd Street
Technical Support Building (RTL550)	550 3rd Street
Machine Shop (RTL 580)	580 3rd Street

Outfall 004 includes effluent discharged from the following location:

Name of Facility	Location
Sigma V	3110 Port of Benton Blvd.

Outfall 005 includes effluent discharged from the following location:

Name of Facility	Location
2400 Stevens Building	2400 Stevens Drive

Outfall 006 includes effluent discharged from the following locations:

Name of Facility	Location
Engineering Support Building	540 5th Street
Chemical Engineering Laboratory	3061 M Avenue
Process Development Laboratory East	3071 M Avenue

Outfall 007 includes effluent discharged from the following location:

Name of Facility	Location
Process Development Laboratory West	580 5th Street

Note: Historical data listed for Outfall 002, Outfall 004, Outfall 005, Outfall 006 and Outfall 007; indicate the buildings consist mainly of restrooms, office space, and few laboratories. Discharges from these facilities will be regulated, but individual monitoring requirements shall not be required at this time with the exception of flow (Part II B, Permit CR-IU001).

B. EFFLUENT LIMITATIONS - Outfall 001 and Outfall 003

During the period the permit is effective, the discharge from each outfall shall not exceed the following effluent limitations:

		EFFLUENT LIMITS	
Effluent Parameter	**Unit of Measurement**	**Monthly Average**	**Daily Maximum**
Flow, peak (Outfall 001 only)	**Gallons per minute (gpm)**		**1,000**
pH	**pH units**		**Effluent discharged into The City's collection system shall not have a pH less than 5.0 or greater than 10.0 at any time.**

During the period the permit is effective, the discharge from combined outfalls shall not exceed the following effluent limitations:

		EFFLUENT LIMITS	
Effluent Parameter	Unit of Measurement	Monthly Average	Daily Maximum
Biochemical Oxygen Demand (5 day BOD)	lbs/day	338	411
Total Suspended Solids (TSS)	lbs/day	352	428
Arsenic	lbs/day	0.14	0.17
Cadmium	lbs/day	0.45	0.55
Chromium	lbs/day	2.45	2.98
Copper	lbs/day	1.83	2.22
Cyanide	lbs/day	0.31	0.38
Lead	lbs/day	0.52	0.63
Mercury	lbs/day	0.02	0.03
Molybdenum	lbs/day	0.10	0.12
Nickel	lbs/day	3.26	3.97
Selenium	lbs/day	0.06	0.07
Silver	lbs/day	0.28	0.34
Zinc	lbs/day	1.46	1.78

Notes:

1. The "Daily Maximum" is defined as the greatest allowable value for any calendar day.

2. The "Monthly Average" other than pH is the arithmetic mean of samples collected during a calendar month.

C. DISCHARGE PROHIBITIONS

The permittee shall not discharge wastewater containing the following substances which meet any of the criteria listed below from any outfalls (City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 2, Section 2.1, Prohibited Discharge Standards):

General Prohibitions: No user shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes pass-through or interference. These general prohibitions apply to all users of the POTW whether or not they are subject to categorical pretreatment standards or any other federal, state, or local pretreatment standards or requirements.

Specific Prohibitions: No user shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:

1. Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, wastestreams with a closed-cup flashpoint of less than 140°F (60°C) using the test methods specified in 40 CFR 261.21;

2. Wastewater having a pH less than 5.0 or more than 10, or otherwise causing corrosive structural damage to the POTW or equipment; unless specifically authorized by the City. In no case shall the discharge have a pH less than 5.0;

3. Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in interference;

4. Pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW;

5. Wastewater having a temperature which will inhibit biological activity in the treatment plant resulting in interference, but in no case wastewater which causes the temperature at the introduction into the treatment plant to exceed 104°F (40°C) unless the Approval Authority, upon the request of the POTW, approves alternate temperature limits;

6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

8. Trucked or hauled pollutants, except at discharge points designated by the City;

9. Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;

10. Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the City's NPDES permit. Color (in combination with turbidity) shall not cause the treatment plant effluent to reduce the depth of the compensation point for photosynthetic activity by more than ten percent (10%) from the seasonably established norm for aquatic life;

11. Wastewater containing any radioactive wastes or isotopes except as specifically approved by the Public Works Director in compliance with applicable State or Federal regulations;

12. Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, non-contact cooling water, and unpolluted wastewater, unless specifically authorized by the Public Works Director[(1)];

13. Any sludges, screenings, or other residues from the pretreatment of industrial wastes or from industrial processes;

14. Medical wastes, except as specifically authorized by the Public Works Director;

15. Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail a toxicity test;

16. Detergents, surface-active agents, or other substances which may cause excessive foaming in the POTW;

17. Any liquid, solids, or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the POTW or to the operation of the POTW. At no time shall two (2) successive readings on an explosion meter, at the point of discharge into the system (or at any point in the system), be more than five percent (5%) nor any single reading over ten percent (10%) of the lower explosive limit (LEL) of the meter;

18. Grease, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dusts, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastics, gas, tar asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes;

19. Any substance which will cause the POTW to violate its NPDES and/or other disposal system permits;

20. Any wastewater, which in the opinion of the Public Works Director can cause harm either to the sewers, sewage treatment process, or equipment; have an adverse effect on the receiving stream; or can otherwise endanger life, limb, public property, or constitute a nuisance, unless allowed under special agreement by the Public Works Director (except that no special waiver shall be given from categorical pretreatment standards);

21. The contents of any tank or other vessel owned or used by any person in the business of collecting or pumping sewage, effluent, septage, or other wastewater unless said person has first obtained testing and approval as may be generally required by the City of Richland and paid all fees assessed for the privilege of said discharge;

22. Any dangerous or hazardous wastes as defined in rules published by the State of Washington in WAC 173-303 or in EPA rules 40 CFR, Part 261;

23. Persistent pesticides and/or pesticides regulated by the Federal Insecticide Fungicide Rodenticide Act (FIFRA). Pollutants, substances, or wastewater prohibited by this Section shall not be processed or stored in such a manner that they could be discharged to the POTW.

[1]Small quantities of deionized water, non-contact cooling water, condensate, and unpolluted wastewater have been authorized by the Public Works Director.

PART II - MONITORING REQUIREMENTS

A. OUTFALL 001 AND OUTFALL 003 MONITORING REQUIREMENTS

All samples, excluding pH and temperature, shall be submitted to an Ecology accredited laboratory (refer to Part V. E.). The industrial user shall monitor Outfalls 001, and 003, and comply with the following monitoring requirements:

Parameter	Units	Sample Point	Minimum Sampling Frequency	Type of Sample
Flow	gpd	Effluent	continuous	totalizer
pH	pH units	Effluent	quarterly	grab
Biochemical Oxygen Demand (5 day BOD)	mg/L	Effluent	1/year	24HC
Total Suspended Solids (TSS)	mg/L	Effluent	1/year	24HC
Antimony	mg/L	Effluent	2/year	24HC
Arsenic	mg/L	Effluent	2/year	24HC
Beryllium	mg/L	Effluent	2/year	24HC
Cadmium	mg/L	Effluent	2/year	24HC
Chromium	mg/L	Effluent	2/year	24HC
Copper	mg/L	Effluent	2/year	24HC
Total Cyanide	mg/L	Effluent	2/year	grab
Lead	mg/L	Effluent	2/year	24HC
Mercury	mg/L	Effluent	2/year	24HC
Molybdenum	mg/L	Effluent	2/year	24HC
Nickel	mg/L	Effluent	2/year	24HC

Parameter	Units	Sample Point	Minimum Sampling Frequency	Type of Sample
Selenium	mg/L	Effluent	2/year	24HC
Thallium	mg/L	Effluent	2/year	24HC
Silver	mg/L	Effluent	2/year	24HC
Zinc	mg/L	Effluent	2/year	24HC
Total Phenols	mg/L	Effluent	2/year	grab
Priority Pollutants	mg/L	Effluent	2/year	Note #6 and #8

B. MONITORING REQUIREMENTS FOR OUTFALLs 002, 004, 005, 006 and 007

Monthly Average Wastewater Flow
Verify once per year during the month of anticipated peak flows for each outfall. Reference 4.3 (D, E) Pretreatment Program 17.30

Notes:

1. Sampling frequency of 4/year shall require permittee to collect samples at quarterly intervals (once in the first 3 months of the year, once in the second 3 months of the year, etc.) for the calendar year. Sampling requirements for 2/year shall require the permittee to collect samples at semi-annual intervals (once in the first 6 months of the year and once during the second 6 months of the year). For sampling purposes, the calendar year will begin in January and end with the month of December.

2. A "24-hour composite (24HC)" sample shall mean a flow-proportioned mixture of not less than 8 discrete aliquots. Each aliquot shall be a grab sample of not less than 100 ml and shall be collected, composited, and preserved in accordance with 40 CFR, Part 136 and amendments.

3. A "Grab" sample is an individual sample collected in less than 15 minutes, without regard for flow or time. Grab samples will be collected during business hours.

4. A minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organics in accordance with 40 CFR 403.12(5)(iii) - (vi).

5. Individual grab samples for total cyanide analyses will be checked for sulfide and chlorine residual interferences before the sample is preserved with sodium hydroxide to insure sample integrity.

6. Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater*, unless otherwise specified in this permit or approved in writing by the Washington State Department of Ecology.

7. All samples must be handled in accordance with the specific container storage requirements, preservation techniques, and holding times identified in 40 CFR 136.3, Table II, to ensure sample integrity.

8. The permittee shall perform chemical analyses on the final effluent for organic priority pollutants listed in Table II, 40 CFR Part 122, Appendix D.

9. The permittee shall perform chemical analyses for metals and other toxic pollutants (cyanide and total phenols) as specified in Table III, 40 CFR Part 122, Appendix D. Sampling for metals and priority pollutants shall be conducted at the same time. Results for metals shall be expressed as total values and reported as milligrams per liter (mg/l). If a metal is reported as non-detectable, the permittee shall include the analytical detection limit (e.g. < 0.02 mg/). Mass loadings shall be calculated and reported for combined discharges of Outfalls 001 and 003.

10. Violation of effluent limits shall require monthly resampling of parameter(s) violated until two successive samples are in compliance with permit limits.

11. After two years of sampling data and full compliance with permit conditions, the permittee may petition the City to modify the sampling frequency in their industrial wastewater discharge permit.

PART III - REPORTING REQUIREMENTS

Summary Table*

Permit Section	Submittal	Frequency	First Submittal Date
Part V, Section N	Request for Reduction of Monitoring	As Necessary	As Necessary (subject to Note #11 Part II of this permit)
Part III, Section A	Discharge Monitoring Report	Quarterly	July 15th, 2005
Part III, Section B	Notification of Violation	As Necessary	Verbal notification within 24 hours of learning of violation; AND written report within five (5) days
Part III, Section C	Notification of Accidental or Slug Discharge	As Necessary	Immediately; written report within five (5) days
Part III, Section D	Notification of Changes in Wastewater Characteristics	90 days prior to any substantial change	As Necessary
Part III, Section E	Demonstration of Upset	As Necessary	As Necessary
Part IV, Section A	Accidental Spill Prevention Plan (ASPP)	Update as Necessary	Update as Necessary
Part V, Section J	Signatory Authority	Update prior to/together with any report, information, or applications	Update as Necessary
Part IV Section B	Removal of Significant Quantities of Non-Contact Cooling Water from Sanitary Sewer System	Once	Complete by March 1st 2005

Summary Table Continued*

Permit Section	Submittal	Frequency	First Submittal Date
Part V, Section G	**Engineering Report**	**Before Construction, Addition, or Modification of any Pretreatment Equipment**	**As Necessary**
Part V, Section O	**Duty to Reapply**	**90 Days Prior to Permit Expiration**	**4/29/09**
Part V, Section S	**Notification of Bypass If Known in Advance**	**Ten Days (10) Prior To Bypass**	**As Necessary**
Part V, Section S	**Notification of Bypass If Unanticipated**	**Within Twenty Four (24) Hours of Becoming Aware**	**Written Report Due Within Five (5) Days Unless Waived by City**

*Intended to be used as a guide, and is not all inclusive

A. REPORTING OF MONITORING RESULTS

Monitoring results in Part II of this permit shall be summarized each calendar quarter (i.e. once for the first 3 months of the year, once for the second 3 months of the year) on a Discharge Monitoring Report form. The reports shall be postmarked by the 15th of the first month following each quarter. In the event that additional monitoring is conducted, all results shall be contained in the report. Legible copies of these and all other reports required of this permit shall be signed and certified in accordance with the requirements of Part V, Section J, Signatory Requirements, and submitted to the City pretreatment coordinator at the following address:

City of Richland
Wastewater Treatment Facility
Attn: Pretreatment Coordinator, MS27
P. O. Box 190
Richland, WA 99352

B. NOTIFICATION OF VIOLATION

If self-monitoring analytical results indicate a violation of discharge limits contained in this permit, the permittee must notify the City within 24 hours of becoming aware of the violation. The permittee must also repeat the sampling and submit the analysis to the City within 30 days of becoming aware of the violation.

C. ACCIDENTAL OR SLUG DISCHARGE

The industrial user shall notify the City immediately, either by person or by phone (942-7485, or during non-business hours, 539-3779), upon any accidental or slug discharge to the sanitary sewer as outlined in the Accidental Spill section of City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 4, Section 4.7. Formal written notification discussing circumstances and corrective actions shall be submitted to the City within five working days of occurrence.

D. CHANGES IN WASTEWATER CHARACTERISTICS

The industrial user shall notify the City, in person or by phone, 90 days prior to any substantial change in the volume or characteristics of the wastewater being introduced into the POTW from the permittee's industrial processes. Formal written notification shall be made at least ten days prior to such introduction, and the permittee shall obtain approval from the City to do so.

E. UPSET

1. Definition
   For the purpose of this section, "Upset" means an exceptional incident in which there is unintentional and temporary non-compliance with applicable pretreatment standards because of factors beyond the reasonable control of the permittee. An upset does not include non-compliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless and/or improper operation.

2. Conditions Necessary for a Demonstration of Upset
   A permittee who wishes to establish the affirmative defense of an upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

   a. An upset occurred and the permittee can identify the specific cause(s) of the upset;

b. The facility was, at the time, being operated in a prudent and workman-like manner and in compliance with applicable operation and maintenance procedures; and

c. The permittee has submitted the following information to the City within 24 hours of becoming aware of the upset (if this information is provided verbally, a written submission must be provided within five days):

(1) A description of the indirect discharge and cause of non-compliance.

(2) The period of non-compliance, including exact dates and times, or if not corrected, the anticipated time the non-compliance is expected to continue.

(3) Steps being taken and/or planned to reduce, eliminate, or prevent recurrence of the non-compliance.

3. Burden of Proof
In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset shall have the burden of proof.

4. Permittee Responsibility in Case of Upset
The permittee shall control production of all discharges to the extent necessary to maintain compliance with applicable pretreatment standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

PART IV - SPECIAL CONDITIONS/COMPLIANCE SCHEDULES

A. ACCIDENTAL SPILL PREVENTION PLAN (ASPP)

The permittee shall continue to implement the ASPP for hazardous substances, as specified by the City's Identification of Potential Spill and Slug Discharge Sites and Pathways manual. The ASPP shall address the following categories of management practices and apply AKART (all known, available, and reasonable methods of prevention, control and treatment) at all times:

1. Prevention--The plan must include prevention practices--i.e., monitoring systems, non-destructive testing, labeling, covering or enclosing materials, equipment or process operations, and other techniques used to prevent materials or spills.

2. Containment--Containment practices used to contain or capture releases of materials within the industrial premises.

3. Mitigation--Mitigation practices for the cleanup and treatment of spill materials.

4. Ultimate Disposition--Practices for the proper disposal of spilled materials.

5. Education and Training--Education and training of staff on proper procedures.

If appropriate, the permittee shall obtain a hazardous waste generator number from EPA or the state for proper disposal of hazardous wastes.

If the permittee utilizes a pretreatment system for the purpose of reducing pollutant levels, prior to discharge to the City sewer, a sampling site acceptable to the City shall be maintained downstream of the final pretreatment system for monitoring the industrial discharge. City personnel shall have access to the sample site during normal business hours and in the event of an emergency.

The permittee shall use spill prevention practices to preclude the discharge of any substance that violates the Prohibited Discharge Standards in City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 2, Section 2.1, or conditions of this permit.

In the event of a concentrated solutions spill, such as a tank failure, the permittee shall not discharge any spilled solution into the municipal sewer system unless laboratory test results indicated that the substance meets the conditions of this permit. The permittee shall receive approval from the City prior to any discharge of spilled solution.

The permittee shall maintain and inspect all process solution tanks on a regular basis. Any leaks shall be repaired promptly.

Any spent plating, etching, and other concentrated process tank solutions, which are not or cannot be pretreated to meet permit discharge limits shall be disposed of according to the Hazardous Waste Regulations of the State of Washington and EPA.

The permittee shall forward the following information regarding any concentrated process tank solutions to the City prior to discharge to the sewer system:

a. Volume of tank,
b. Method used to treat the discharge to meet the effluent limits of this permit, and
c. Heavy metal (Cd, Cr, Cu, Ni, Pb, Zn) content, pH and cyanide concentrations of the treated discharge.

Any concentrated solution tank discharge which has not been approved by the City or whose contents do not meet effluent limits of this permit shall be treated as a discharge violation of the permit, and subject to penalty.

Chemicals stored in bulk chemical storage buildings shall be stored in a manner which will prevent the entry of these solutions into the sanitary sewer, storm sewer, or waters of the state. Process tanks shall be located in an area that shall have no-outlet to the city sewer systems or waters of the state.

Less than 90-day accumulation for waste chemicals, chemical sludges, paint sludges, or other hazardous waste pursuant to WAC 173-303-200(1) shall take place in containers which meet the integrity requirements of WAC 173-303-630.
Such containers will be provided with secondary containment meeting the requirements of WAC 173-303-630(7) in order to prevent spills to the sanitary sewer system, storm sewer system, or waters of the state. Waste chemicals,
chemical sludges, paint sludges or other hazardous waste shall be disposed of according to EPA and Ecology regulations. The permittee shall provide positive

protection (e.g. shut-off devices) for all drains located in permitted storage facilities. Bulk chemicals shall be stored and dispensed in areas that eliminate potential spills to the sanitary sewer system, storm sewer system, or waters of the state. Non-compatible bulk chemicals must be segregated.

No paint booth wastes or solvents shall be discharged to the sanitary sewer unless they meet the provisions of this permit, and are approved by the City.

PART V - STANDARD CONDITIONS

A. COMPLIANCE

The permittee shall comply with all the Prohibited Discharge Standards in City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 2, Section 2.1, and is responsible to take whatever steps are necessary to ensure discharge requirements of this permit are met.

B. INSPECTION AND ENTRY

The permittee shall allow the City of Richland pretreatment coordinator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;

4. Sample or monitor for the purposes of assuring permit compliance, any substances or parameters at any location; and

5. Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

C. RECORD RETENTION

1. The permittee shall retain and preserve for no less than three (3) years any records, books, documents, memoranda, reports, correspondence, and any and all summaries thereof relating to monitoring, sampling, and chemical analyses made by or in behalf of the permittee in connection with its discharge.

2. All records pertaining to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City, shall be retained

and preserved by the permittee. All records shall be retained until all enforcement activities have concluded and all periods of limitation, with respect to any and all appeals, have expired.

3. All records required by the permit shall be available for review at reasonable times by authorized representatives of the City.

D. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the user shall record the following information:

1. The exact place, date, and time of sampling;
2. Who performed the sampling and measurements;
3. The dates the analyses were performed;
4. The person(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of all required analyses.

E. ANALYTICAL METHODS

All analyses to determine compliance with permit limits shall be performed in accordance with 40 CFR, Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act" and amendments, or with any other current test procedures approved by EPA or the Washington State Department of Ecology. Analytical techniques for additional pollutants not contained in Part 136 must be performed by using validated analytical methods approved by EPA [40 CFR 403.12(b)(5)(vi)].

The analysis of samples collected pursuant to the requirements of this permit shall be performed by an Ecology accredited laboratory.

F. CONFIDENTIAL INFORMATION

Except for data determined to be confidential under City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30, Part 7, all reports required by this permit shall be available for public inspection at the City of Richland's industrial pretreatment office.

G. PROPER OPERATION AND MAINTENANCE

The permittee shall keep and maintain an operation and maintenance log on all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the permittee to achieve compliance with the conditions of this permit. The language in the permit referring to "pretreatment" refers to both administrative measures and physical systems. Proper operation and maintenance includes, but is not limited to effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

Water conservation practices, i.e., turning off hoses and faucets when not in use, source reduction, reuse, recycling, shall be used to reduce total effluent volume. Incoming rinse water shall be turned off and shut-off devices shall be closed at all times that the facility is not operating, i.e., nights, weekends, and holidays, to prevent accidental spills. Waste preventative practices shall be used to reduce or eliminate contaminate loading to the municipal sewer system. These will include, but will not be limited to, minimizing excessive dragout of cleaning, stripping, etching, and plating solutions.

Before the construction, addition or modification of pretreatment equipment, the user must submit an engineering report to the City and/or WDOE for approval (Section 3.3 Pretreatment Program 17.30).

H. DILUTION

The permittee shall not increase the use of potable or process water, or in any way intentionally attempt to dilute the final discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

I. PROPER DISPOSAL OF PRETREATMENT SLUDGES AND SPENT CHEMICALS

The disposal of generated sludges and spent chemicals shall be done in accordance with Section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act, and any state hazardous waste requirements.

J. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the City shall be signed and certified as follows:

1. All permit applications shall be signed by either a principal executive officer or ranking official.

2. All reports required by this permit and other information requested by the City shall be signed by a person described above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the City, and
   b. The authorization specifies either individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. If an authorization under J.2.b is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of J.2.b must be submitted to the City prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Any person signing a document under this section shall make the following certification:

   " I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

K. EMERGENCY SUSPENSION OF SERVICE AND REVOCATION OF PERMIT

The City may, without advance notice, order the suspension of the wastewater treatment service and revoke the industrial wastewater discharge permit to a permittee when it appears to the City that an actual or threatened discharge:

1. Presents or threatens an imminent or substantial danger to the health or welfare of persons or substantial danger to the environment; or

2. Threatens to interfere with the operation of the POTW, or to violate any pretreatment limits imposed by the code.

The permittee notified of the City's suspension order shall immediately cease all discharges. In the event of failure of the permittee to comply with suspension orders, the City may immediately take all necessary steps to halt or prevent any further discharge by such permittee into the POTW. The City shall have the authority to physically cap, block, or seal the permittee's sewer line (whether public or private property) in order to terminate service; the City shall have the right to enter upon the permittee's property to accomplish the capping, blocking, or sealing of the permittee's sewer line; the City may also commence judicial proceedings immediately thereafter to compel the permittee's specific compliance with such order and/or to recover civil penalties. The City shall reinstate the industrial wastewater discharge permit and/or wastewater treatment service upon clear and convincing proof by the permittee of the elimination of the non-complying discharge or conditions creating the threat as set forth above.

L. LIMITATION OF PERMIT TRANSFER

Industrial wastewater discharge permits are issued to a specific user for a specific operation and are not assignable to another business or company, or transferable to any other location without the prior written approval of the City. Sale of a permittee's business shall obligate the purchaser to seek prior written approval of the City for continued discharge to the city sewer system.

M. FALSIFYING INFORMATION OR TAMPERING WITH MONITORING EQUIPMENT

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate may result in punishment under the criminal laws of the City, as well as being subjected to civil penalties.

N. MODIFICATION OR REVISION OF THE PERMIT

1. The terms and conditions of this permit may be subject to modification by the City at any time that limitations or requirements, as identified in the City's ordinance, are modified or other just cause exists.

2. This permit may also be modified to incorporate special conditions resulting from the issuance of a special order.

3. The terms and conditions may be modified as a result of EPA promulgating a new federal pretreatment standard.

4. Any permit modifications which result in new conditions in the permit shall include a reasonable time schedule for compliance as necessary.

5. The permittee may file a request for permit modification or revision provided such request does not create a violation of any existing applicable requirements, standards, laws, or rules and regulations.

O. DUTY TO REAPPLY

The City shall notify the permittee 180 days prior to the expiration of the permittee's permit. The permittee shall reapply for reissuance of the permit a minimum of 90 days prior to the expiration date of the permit on a form provided by the City.

P. SEVERABILITY

If any position, paragraph, word, or section of this permit is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, and sections shall not be affected and continue in full-force and effect.

Q. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any invasion of personal rights, nor any infringement of federal, state, or local regulations.

R. FLOW MEASUREMENTS

The permittee shall provide access to a water and/or sewer meter which can provide accurate information regarding sanitary, industrial process wastewater, and cooling water discharges to the sewer.

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ten percent (10%) from true discharge rates throughout the range of expected discharge volumes. The flow measurement device must be approved by the City before installation.

S. BYPASS OF TREATMENT FACILITIES

1. Definitions:
   a. "Bypass" means the intentional diversion of wastestreams from any portion of a permittee's treatment facility.

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass Not Violating Applicable Pretreatment Standards or Requirements
   The permittee may allow any bypass to occur which does not cause applicable pretreatment standards or requirements to be violated, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs 3 and 4 of this section.

3. Notice:
   a. If the permittee knows in advance of the need for a bypass it shall submit notification to the City, if possible, at least ten (10) days prior to the date of the bypass.

b. The permittee shall submit verbal notice of unanticipated bypass that exceed applicable pretreatment standards to the City within 24 hours from the time the permittee becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause, the duration of the bypass, including exact dates and times and, if the bypass has not been corrected, the anticipated time it is expected to continue and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass. The City may waive the written report on a case-by-case basis if the verbal report has been received within 24 hours.

4. Prohibition of Bypass

a. Bypass is prohibited and the City may take enforcement action against the permittee for a bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal equipment downtime or preventative maintenance; and

(3) The permittee submitted notices as required under paragraph 3 of this section.

b. The City may approve an anticipated bypass, after considering its adverse effect, if the City determines that it will meet the three conditions listed in paragraph A of this section.

T. ENFORCEMENT PROVISION

The City may seek any or all of the remedies or penalties provided in City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30 as implemented by the City of Richland Enforcement Response Plan. These remedies may or may not include recovery of costs incurred by the City, in response to, but not limited to, the following:

1. Any violation by the permittee of the provision of the industrial wastewater discharge permit;

2. Any violation by the permittee of the provisions of the City code; and

3. Any violation by the permittee of any order of the City with respect to provisions set forth in the industrial wastewater discharge permit or the City Code.

The range or severity of remedial actions taken by the City against the permittee will be determined by, but not limited to the nature, duration, frequency, etc., of the violation. Specific responses and criteria are identified in the City of Richland Enforcement Response Plan.

FACT SHEET

BATTELLE MEMORIAL INSTITUTE
INDUSTRIAL WASTEWATER PERMIT NO. CR-IU001

PERMITTEE: **Battelle Memorial Institute**
P. O. Box 999
MSIN J2-25
Richland, WA 99352

PERMIT NUMBER: **CR-IU001**

Application has been made by Battelle Memorial Institute to renew industrial wastewater discharge permit No. CR-IU001. The permit allows the research and development facilities to discharge pollutants to the City of Richland's POTW pursuant to all applicable pretreatment regulations, standards, and requirements under local, state, and federal laws, or laws that may become effective during the term of this permit. The original permit, issued August 31, 1992, was issued to Battelle Memorial Institute-Pacific Northwest Laboratories. A request was received by the City to reissue the permit to Battelle Memorial Institute, without an organizational division specified. The request was made in response to organizational changes within Battelle Memorial Institute. These changes did not affect the physical operations of the laboratories and were administrative in nature.

The City of Richland intends to reissue a permit to Battelle Memorial Institute to allow the discharge of pollutants subject to certain effluent limitations and other conditions necessary to carry out the provisions of local, state and federal law.

PUBLIC COMMENT AND INFORMATION
In accordance with state regulations, WAC 173-216-090 outlines requirements for public notice of draft permits. Interested persons are invited to submit written comments regarding the new permit. Comments must be submitted within thirty (30) days of the date of public notification. Comments and requests for copies of the proposed permit, the fact sheet, and any non-proprietary information contained in the permit application should be sent to:

City of Richland
Wastewater Treatment Facility
Pretreatment Program
Attn: Pretreatment Coordinator, MS27
P. O. Box 190
Richland WA 99352

If comments received indicate significant public interest in the new permit or if useful information could be produced thereby, the director may hold a public hearing on the application. Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. The application, new permit and related documents are available for inspection and copying between the hours of 7:30 a.m. and 3:00 p.m. on weekdays at the Wastewater Treatment Facility. The office phone number is (509) 942-7485.

DESCRIPTION OF FACILITY

The Battelle Memorial Institute research laboratories are located in north Richland. The point of contact is the Director, Environment, Safety, Health and Quality via the Battelle main switchboard (509) 375-2121.

DESCRIPTION OF OUTFALLS

Outfall 001 - Identified as City manhole number L-268. The 12-inch sewer line is located west of the intersection of Q Avenue and 10th Street. A daily average wastewater flow of approximately 55,700 gallons enters the City sewer from Outfall 001.

Outfall 002 - Identified as City manhole number L-83. The 8-inch sewer line is located at the intersection of 6th Street and W Avenue. A daily average wastewater flow of 1,100 gallons is discharged from Outfall 002 into the City sewer. The reduction in flow is a result of laboratory activities moving to another location.

Outfall 003 - Identified as City manhole number L-89. The 8-inch sewer line is located west of the Research Technology Laboratory (RTL) at 520 3rd Street. A daily average wastewater flow of 51,200 gallons enters the City sewer from Outfall 003.

- The following outfalls have not been monitored since issuance of the permit in 1992; wastewater flows are conservatively based on process knowledge provided by Battelle Memorial Institute in their permit application.

Outfall 004 - Identified as City manhole number L-51. The 10-inch sewer line is located on 9th Street. Approximately 1,500 gallons of wastewater is discharged daily from Outfall 004 into the City sewer. The primary source of wastewater entering Outfall 004 is sanitary waste.

Outfall 005 - Identified as City manhole number L-166. The 4-inch sewer line is located north of the 2400 Stevens Building, which contains mostly office space. Approximately 3,500 gallons of wastewater is discharged daily from this location into the sanitary sewer. The majority of wastewater generated and discharged is sanitary waste.

Outfall 006 - Identified as Manhole L-77. The sewer line is located on M Avenue. Approximately 600 gallons of wastewater is discharged daily from this location into the sanitary sewer. The majority of wastewater generated and discharged is sanitary waste.

Outfall 007 - Process Development Laboratory West (PDLW), located at 580 5th street. A sampling manhole would need to be installed in order to have a means for monitoring to demonstrate compliance with pretreatment regulations. Approximately 100 gallons of wastewater is discharged daily from this location into the sanitary sewer. The majority of the wastewater generated and discharged is sanitary waste.

DESCRIPTION OF OPERATIONS

Battelle Memorial Institute performs scientific research and development (R&D) on physical, chemical, radiological, and biological processes at these facilities in Richland. A portion of these activities involves laboratory work using a variety of chemicals depending on the nature of the research activity. In most instances, these chemicals are used in very small quantities. A portion of these activities also involves laboratory work using biological materials (e.g., bacteria, proteins, viruses). All biological wastes are sterilized using an autoclave or chemically disinfected prior to discharge to the sewer. A portion of this work also involves the discharge of limited quantities of deionized water, non-contact cooling water, condensate, and unpolluted wastewater. The wastewater generated from Battelle facilities is primarily from equipment cooling and activities that parallel typical sanitary sewer discharges. Battelle does not have any major industrial or manufacturing processes.

The Standard Identification Classification (SIC) code for research facility services is 8731. At this time, research and development laboratories are not listed as categorical industries.

Environmental permits issued to Battelle Memorial Institute include:

Underground Storage Tank Registration:
- EDL-93
- LSLII-94

Wastewater:
- City of Richland Wastewater Discharge Permit CR-IU001

Underground Well:
- Underground Injection Control (UIC) well registration 1/24/2002

Air Permits:
- Benton County Clean Air Authority: registered as a Class 1 source of air pollution (smallest class)
- Health - #AIR 00-410, NOC Approval, Modification of RTL Facility Emission Units 4/27/2000

Radioactive Materials:
- State of Washington Radioactive Material License: WN-L027-1

RCRA Washington State Dangerous Waste Generator ID Numbers:
- Battelle (WAD004492575)
- Stevens Drive (WAD988474607)
- Sigma V (WAD988474599)

DISCHARGE INFORMATION

Battelle discharges wastewater from research facilities seven days a week. The facilities normally operate on an eight-hour day work schedule. Some research requires the facilities to operate 24 hours a day up to seven days a week. Monthly average flow from the combined Outfalls of 001, 002, 003, 004, 005, and 006 is approximately 113,600 gallons per day (gpd). Flow from Outfall 004, 005 and 006 are predominantly sanitary. All flows were over the 5-year period of January 2000, through September 2004. Outfall 007 does not contribute a significant amount to the City of Richland sanitary sewer, estimated to be approximately 100 gpd. Flow measurements were obtained from historical monitoring data for Outfalls 001, 002, and 003, and estimated with process knowledge for Outfalls 004, 005, 006, and 007. The outfalls are a combination of sanitary and process wastewater, and non-contact cooling water.

Conventional pollutants such as biochemical oxygen demand (BOD), total suspended solids (TSS) and, ammonia (NH_3) discharged from the research facilities have not caused any reportable problems or interference with treatment at the City's Wastewater Treatment Facility. An evaluation of historical monitoring data demonstrates that metal analyses performed on Battelle's wastestreams have been below the City's local limits. Priority pollutants have been intermittently detected in some of the wastestreams. Monitoring results, which are listed below and on the following pages, are a combination of City compliance monitoring and data submitted in Battelle's discharge monitoring reports.

January 2000-September 2004
Self-Monitoring and City Monitoring Data
Conventional Pollutants

Parameter	Outfall 001	Outfall 002	Outfall 003	Total Discharge (excluding pH)
Flow,MGD 5-Year Average	0.055700	0.001100	0.051200	0.108000
Flow, MGD 5-Year Max	0.123600	0.009800	0.095700	0.229100
pH, Minimum	5.4		6.2	
pH, 5-Year Max	9.2	8.44	8.4	
BOD, mg/l 5-Year Average	51		<7.5	
BOD, lbs/day 5-Year Average				<26.89
BOD, lbs/day 5-Year Max				59.4
TSS, mg/l 5-Year Average	64		<16	
TSS, lbs/day 5-Year Average				<36.56
TSS, lbs/day 5-Year Max				<75

January 2000-September 2004
Self-Monitoring and City Monitoring Data
Metals

Parameter	Outfall 001	Outfall 002	Outfall 003	Total Discharge
Arsenic, mg/l 5-Year Average	<0.015		<0.015	
Arsenic, lbs/day 5-Year Average				<0.002
Arsenic, lbs/day 5-Year Max				<0.04
Copper, mg/l 5-Year Average	0.253		0.048	
Copper, lbs/day 5-Year Average				0.141
Copper, lbs/day 5-Year Max				0.396
Cyanide, mg/l 5-Year Average	<0.006		<0.007	
Cyanide, lbs/day 5-Year Average				<0.005
Cyanide, lbs/day 5-Year Max				<0.011
Mercury, mg/l 5-Year Average	<0.0002		<0.0001	
Mercury, lbs/day 5-Year Average				<0.0001

Parameter	Outfall 001	Outfall 002	Outfall 003	Total Discharge
Mercury, lbs/day 5-Year Max				<0.04
Zinc, mg/l 5-Year Average	0.054		<0.046	
Zinc, lbs/day 5-Year Average				<0.040
Zinc, lbs/day 5-Year Max				0.123
Antimony, mg/l 5-Year Average	<0.01		<0.01	
Antimony, lbs/day 5-Year Average				N/A
Antimony, lbs/day 5-Year Max				N/A
Beryllium mg/l 5-Year Average	<0.001		<0.0009	
Beryllium lbs/day 5-Year Average				N/A
Beryllium lbs/day 5-Year Max				N/A
Cadmium mg/l 5-Year Average	<0.003		<0.003	
Cadmium lbs/day 5-Year Average				<0.002
Cadmium lbs/day 5-Year Max				<0.004
Chromium mg/l 5-Year Average	<0.004		<0.004	
Chromium lbs/day 5-Year Average				<0.003
Chromium lbs/day 5-Year Max				<0.006
Lead mg/l 5-Year Average	<0.006		<0.004	
Lead lbs/day 5-Year Average				<0.002
Lead lbs/day 5-Year Max				<0.02
Molybdenum mg/l 5-Year Average	<0.008		<0.004	

Parameter	Outfall 001	Outfall 002	Outfall 003	Total Discharge
Molybdenum lbs/day 5-Year Average				<0.005
Molybdenum lbs/day 5-Year Max				<0.011
Nickel mg/l 5-Year Average	<0.012		<0.01	
Nickel lbs/day 5-Year Average				<0.015
Nickel lbs/day 5-Year Max				<0.022
Selenium mg/l 5-Year Average	<0.004		<0.004	
Selenium lbs/day 5-Year Average				<0.002
Selenium lbs/day 5-Year Max				<0.006
Silver mg/l 5-Year Average	<0.004		<0.004	
Silver lbs/day 5-Year Average				<0.005
Silver lbs/day 5-Year Max				<0.011
Thallium mg/l 5-Year Average	<0.008		<0.007	
Thallium lbs/day 5-Year Average				N/A
Thallium lbs/day 5-Year Max				N/A

Less than detected value, Metals - metal was detected during sampling event(s) but not on a continuous basis.

January 2000-September 2004
Self-Monitoring and City Monitoring Data
Priority Pollutants Detected, ug/l (5 year Max)

Parameter	Outfall 001	Outfall 002	Outfall 003
2-Butanone	5.000		
4-Methylphenol			
Acetone			
Benzyl Alcohol			
Bis(2-ethylhexyl) phthalate	7.800		110
Bromodichloro-methane	3.800		3.900
Butylbenzyl-phthalate	3.600		63
Chloroform	18.000		23.000
Di-n-butylphthalate	1.000		11.000
Diethylphthalate	2.400		1.100
Heptachlor epoxide			0.002
Methylene Chloride	0.0700		0.500
m,p -Xylene			
Naphthalene			
o - Xylene			
Phenol	13.000		5.400
Toluene	27.800		0.160
Endosulfan I	0.041		
Endosulfan II	0.029		
Endosulfan Sulfate	0.022		0.002

Parameter	Outfall 001	Outfall 002	Outfall 003
Benzene	3.500		3.500
Ethylbenzene	3.900		
Gamma-BHC (lindane)	0.0065		0.009
Dieldrin	0.020		
4-4'DDT	0.036		
4-4'DDD	0.028		
Trichloroethylene			0.990
Endrin	0.017		0.011
Chlordane	0.350		0.170
Acrolein	3.200		
Aldrin	0.013		
Beta-BHC	0.039		
Delta-BHC	0.011		
Trichlorofluoromethane	0.4		
4-Methyl-2-pentanone	10.000		
M,p-xylenes	1.000		
0-xylene	0.400		
Dibromochloromethane	0.100		0.400
Dimethyl Pthalate	2.000		
Endrin Aldehyde	0.0083		
Benzo(a)anthracene	0.950		
Chrysene	1.100		
Benzo(b)fluoranthene	0.650		
4,4'DDE	0.015		
Di-n-octyl Pthalate			1.600
Alpha-BHC			0.009
Chloromethane	2.500		
Chloroethane	2.800		
2,4-Dichlorophenol	9.100		
2,4,6-Trichlorophenol			
1,1-Dichloroethlene			3.400
1,1-Dichloroethane			3.500
Vinyl chloride			2.400
Tetrachloroethene			2.300
Total Phenol	0.040		<0.020

BASIS FOR PERMIT LIMITS

The permit application was completed by authorized representatives of Battelle Memorial Institute and was signed by Roby D. Enge, Director of Environment, Safety, Health and Quality.

The permit application, analytical data for historical monitoring of pollutants and wastewater flow diagrams are enclosed with the fact sheet. Facility diagrams, Chemical Inventory Reports, and Waste Disposal Reports will be considered confidential per Battelle's request due to security concerns. All effluent data will be made available when requested in order to comply with 40 CFR 403.14(b).

Permit limits are based on general and specific national prohibited discharges [40 CFR 403.5 (a) and (b)], and a combination of local and federal limits, whichever are more stringent. All pertinent data is on file in the City's industrial pretreatment office.

The permit requires the following:

Effluent limits

1. Compliance with City of Richland Municipal Code, Richland Pretreatment Act - Chapter 17.30.

2. Effluent limits for BOD will remain a daily average concentration of 240 mg/l, and TSS daily average concentration of 250 mg/l, per Richland Municipal Code, Pretreatment Act - Chapter 17.30, Part 14.1 K. These are treatable concentrations at the City's wastewater treatment facility. Mass limitations for BOD will remain 214 lbs/day for the daily maximum limit, and 176 lbs/day for the monthly average permit limit. TSS mass remains 223 lbs/day for the daily maximum and 183 lbs/day for the monthly average limit. Due to further reduction of non-sanitary activities at Outfall 002, effluent limits will be removed. The concentration and mass limits shall apply to the combined outfalls of Outfall 001 and Outfall 003. Based on BOD and TSS historical data, the wastewater treatment plant allocation capacity established for Battelle should not impede Battelle's current operations or future growth during this permit cycle.

3. Ammonia limits were removed during the last permit cycle.

4. Concentration limits for total metals will be included as specified in Richland Municipal Code - Pretreatment Act - Chapter 17.30 Part 2.4. Mass limitations shall include daily maximum and monthly average limits. Concentration and mass limits shall apply to the combined outfalls of Outfall 001 and Outfall 003.

5. A peak flow limit will be included in the permit. The instantaneous maximum peak flow limit for Outfall 001 shall remain 1000 gallons per minute (gpm). Outfall 001 discharges into an 18-inch city sewer line with a capacity of 2,591 gpm at a slope of 0.004. Half capacity is

1,296 gpm and therefore a peak flow limit is required to prevent any possible backups in the City sewer line. Battelle has replaced previous pumps with two (2) pumps rated at 500 gallons per minute. Theoretically both pumps running at full capacity should not exceed 1000 gallons per minute combined. The instantaneous maximum peak flow shall remain in place until such time as the capacity of the discharge line changes.

Effluent Limits for Outfall 001 and Outfall 003 Conventional Pollutants					
Parameter	**Daily Minimum**	**Daily Maximum**	**Daily Max. mg/l**	**Daily Max lbs/day**	**Monthly Avg. lbs/day**
Peak Flow, gpm Outfall 001 only		**1000**			
pH	**5**	**10**			

Effluent Limits for Combined Flow from Outfall 001 and Outfall 003 Conventional Pollutants					
Parameter	**Daily Minimum**	**Daily Maximum**	**Daily Max. mg/l**	**Daily Max lbs/day**	**Monthly Avg. lbs/day**
BOD			**240**	**214**	**176**
TSS			**250**	**223**	**183**

Effluent Limits for Combined Flow from Outfall 001 and Outfall 003 Total Metals

Parameter	Daily Minimum	Daily Maximum	Daily Max. mg/l	Daily Max lbs/day	Monthly Avg. lbs/day
Arsenic			0.1	0.17	0.14
Cadmium			0.32	0.55	0.45
Chromium			1.74	2.98	2.45
Copper			1.30	2.22	1.83
Cyanide			0.22	0.38	0.31
Lead			0.37	0.63	0.52
Mercury			0.02	0.03	0.02
Molybdenum			0.07	0.12	0.10
Nickel			2.32	3.97	3.26
Selenium			0.04	0.07	0.06
Silver			0.20	0.34	0.28
Zinc			1.04	1.78	1.46

Monitoring Requirements for Outfall 001 and Outfall 003

1. Sampling frequency requirements for flow monitoring will be continuous.

2. pH monitoring will be four per year (once per quarter). The schedule for quarterly sampling (4/year) will require the permittee to collect samples at 3-month intervals for the calendar year. For sampling purposes, the calendar year will begin in January and end with the month of December.

3. Sampling for BOD and TSS will be once a year.

4. Monitoring requirements for ammonia have been previously removed.

5. A minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organics in accordance with 40 CFR 403.12(5)(iii) - (vi). Grab samples for pH need to be analyzed individually, immediately, and the results combined for reporting (e.g. average of the 4 results during the day). Individual grab samples for cyanide shall be checked for sulfide and chlorine residual interferences before the sample is preserved with sodium hydroxide to insure sample integrity.

6. Sampling for metals and priority pollutants will be twice a year. (Historical monitoring data shows very few metals detected in Battelle's wastewater discharge. Historical data also indicates an increase of priority pollutants discharged to the City's sewer system, over the past few years. Therefore, priority pollutant monitoring will be twice a year.) Sampling for metals and priority pollutants shall be conducted at the same time. The permittee shall analyze its effluent for priority pollutant metals listed in Table III, 40 CFR 122, Appendix D. For organic priority pollutants, the permittee shall analyze its effluent for parameters listed in Table II, 40 CFR 122, Appendix D.

7. If results of self-monitoring indicate failure to comply with an effluent limit for BOD or TSS, the permittee will collect and analyze 24-hour composite samples weekly, until four successive samples are in compliance with the effluent limits. If the permittee exceeds the poundage limits, the City may implement a surcharge for treatment of loadings beyond the allowable limits.

8. For violation of effluent limits other than BOD and TSS, resampling will be monthly for those parameters violated until two successive samples are in compliance. The resampling schedule is designed to establish compliance based on representative samples.

Monitoring Requirements for Outfall 002, 004, 005, 006 and 007

The City agreed to a modified sampling requirement for Outfall 002 on March 25, 1999. The Annex facility houses <10 office staff from the Facilities and Operations division. Wastewater discharged into Outfall 002 is currently averaging 1,100 gallons per day, down from 1,943 during the previous permit cycle. In order to develop a more comprehensive ongoing characterization, and to comply with Sections 4.3(D) and 4.3(E) of the Pretreatment Program, Outfalls 002, 004, 005, 006 and 007 will be monitored as follows:

Monthly Average Wastewater Flow
Verify once per year during the month of anticipated peak flows for each outfall. Reference 4.3 (D, E) Pretreatment Program 17.30

Annual Drainage of Cooling Ponds for Spring Maintenance

Prior to 1998, the City allowed the discharge of pond water and associated pond rinse water into the City's sewer system. This occurred during the annual spring maintenance of the cooling ponds, located north of Battelle's Research Operations Building. On March 18, 1998, a letter was sent to Gary W. McNair, stating the City would no longer approve the discharge of the pond water to the sanitary sewer system. The letter also indicated that Battelle might want to contact the Washington Department of Ecology to obtain a ground water permit as an alternative means of disposal for the pond water. Battelle has since applied for and received a permit from the Washington Department of Ecology to land apply the cooling pond water. The City will allow the pond rinsate to be discharged as long as a minimum amount of water is used for clean up activities. Notification requirements will still be required. Based on historical data, the cooling water has a neutral pH range, and pH-monitoring requirements will not be necessary.

SPECIAL CONDITIONS IN PERMIT

Battelle Memorial Institute was issued a compliance order to eliminate all significant sources of non-contact cooling water in their last wastewater discharge permit. The final report was included with Battelle's permit renewal application. However, as stated in the final report, due to technical and implementation issues at Outfall 003, non-contact cooling water reductions have not been fully realized at this outfall. In an effort to correct the those technical and implementation issues, package chiller units were installed prior to the compliance order's deadline of March 1st, 2005. As stated by Battelle in the final report, it is expected that they should yield similar results as those realized at Outfall 001.

Applying AKART to priority pollutants

AKART, as defined by WDOE is "all known, available, and reasonable methods of prevention, control and treatment." AKART needs to be a high priority when evaluating disposal methods for priority pollutants. The city's sanitary sewer system should be the last means of disposal for these wastes.

The Fact Sheet for the City's wastewater treatment plant NPDES permit addresses AKART, priority pollutant discharges and water quality criteria for the receiving stream (Columbia River). The receiving waterbody segment to which the POTW discharges is on the State's proposed 1998 303(d) list for aldrin, arsenic, benoz(a)pyrene, chloradane, 3,3'-dichlorobenzidine, dieldrin, endrin, heptachlor, heptachlor epoxide, hexachlorobenzene, mercury, PCBs, pH, total dissolved gas and toxaphene. Toxics found present in the POTW effluent during the wastewater treatment plant's last NPDES permit were: ammonia, arsenic, cadmium, chlorine, chloroform, chromium, copper, lead, mercury, nickel, silver and zinc.

The State's Water Quality Standards for Surface Waters now include 91 numeric health-based criteria, promulgated for the State by the EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. Toxic pollutants identified in the POTW effluent do not have a reasonable potential to exceed water quality criteria. Because of this determination, the NPDES permit for the WWTF did not contain any water quality-based effluent limits.

The City's goal is to maintain that level of efficiency by producing an effluent that will not have a reasonable potential to exceed water quality criteria. The purpose of the EPA National Pretreatment Program is to protect municipal treatment plants and the environment from adverse impacts that may occur when hazardous or toxic wastes are discharged into a sewage system. To achieve these goals, the City is recommending that all permittees incorporate AKART with best management practices during the evaluation of waste disposal. The sewage system shall be the last means of disposal. Documentation of waste disposal shall be available for review by the City to assure best management practices are incorporated. Best management practices, as defined by WDOE are "schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent, control, or reduce the pollution of the waters of the State."

Calculations Used to Derive Each Effluent Limit:

All effluent limits shall apply to the combined discharge of Outfall 001 and Outfall 003. Outfall 002 has decreased in use, and consists mainly of sanitary sources of wastewater. The first industrial wastewater permit effluent limits issued to Battelle in 1992 were derived by the uniform concentration equation. The equation is a very conservative assumption that all businesses discharge proportional concentrations of pollutants into the City's sewer system. It was the only option available at that time due to lack of historical monitoring data. During the last permit cycle, once historical data became available, effluent limits were established to reflect the permittee's discharges. Low concentrations of BOD and TSS discharged from the Battelle facilities justified a revision in permit limits. New effluent limits were developed by using a concentration of 240 mg/l for BOD and 250 mg/l for TSS (City of Richland Municipal Code - Richland Pretreatment Act, Chapter 17.30, Part 14.1, K). A combined daily wastewater discharge of 205,149 gallons per day (monthly average of Outfall 001, Outfall 002 and Outfall 003) was used in the calculation. Outfall 002 was a minor contributor to the overall gallonage at that time, and its removal would not have significantly altered the calculation. The data used represented historical data averaged during the years of 1992 through 1998. It also gave Battelle an additional safety buffer, considering it factors in cooling water discharges.

The data from January 2000 through September 2004 indicates a combined daily wastewater discharge of 106,900 gallons per day (monthly average of Outfall 001 and Outfall 003). Outfall 002 averaged 1,100 gallons per day. Calculations were run using 106,900 gallons as the daily average value, which resulted in the effluent limits being cut almost in half. The resulting limitations on the combined outfalls would unfairly punish Battelle for realized non-contact cooling water reductions. Further reductions are expected at Outfall 003. As a result, at this time the City will retain Battelle's current effluent limits on the combined outfalls. The City may reallocate any unused capacity at a later date if necessary. Battelle's current effluent limits, as retained, have shown no realized adverse impact upon the City of Richland's POTW.

Example Calculations Used for Limits in 2000-2005 Permit

Calculation for BOD effluent limit, lbs/day, Daily Maximum
(240 mg/l X 8.34 X 0.205149MGD) = 410.6 lbs BOD

Where:
240 mg/l - concentration for BOD, Richland Pretreatment Act, Chapter 17.30, Part 14.1, K
8.34 - conversion factor for pounds
0.205149 MGD - wastewater discharged from combined outfalls, monthly average

Calculation for BOD effluent limit - lbs/day, Monthly Average:
Daily Maximum pound limit - 411 lbs/day
411 lbs/day x 25 working days/month = 10275 total lbs allowable discharge per month
10275 total lbs /30.4 days in the month = 338 lbs/day, Monthly Average

The same method was used in determining the TSS effluent limit and metals.

The local limits for metals, contained in City of Richland Municipal Code - Richland Pretreatment Act, Chapter 17.30, are technology-based limits on most stringent allowable headworks loading and Best Professional Judgement. Environmental criteria used in developing the local limits included water quality criteria of the receiving stream (Columbia River), wastewater treatment plant sludge quality and use, and protection of the treatment process (secondary and anaerobic inhibition).

Daily maximum and monthly average pound limits for metals - The total flow of 205,149 gallons per day (converted to million gallons per day) was applied to determine metal effluent pound limits:

Example for Arsenic:
Daily Maximum allowable discharge, mg/l = 0.1
0.1 mg/l X 0.205149 MGD X 8.34 = 0.17 lbs/day, Daily Maximum

Where:
0.1 mg/l - Arsenic local effluent limit, Richland Pretreatment Act, Chapter 17.30, Part 2.4.
8.34 - conversion factor for pounds
0.205149 MGD - wastewater discharged from combined outfalls, monthly average

0.17 lbs/day x 25 working days/month = 4.28 total lbs allowable discharge per month
4.28 lbs /30.4 days in the month = 0.14 lbs/day, Monthly Average

The other metals limits listed in the permit were calculated using the same method.

Effluent Limits for Outfall 001 and Outfall 003 Conventional Pollutants		
Parameter	**Existing Effluent Limit For Combined Outfalls**	**New Effluent Limit For Combined Outfalls**
Flow, peak limit, gallons per minute (gpm) - Outfall 001	**1000**	**1000**
pH, Min.	**5**	**5**
pH, Max.	**10**	**10**
BOD, mg/l - Daily Max.	**240**	**240**
BOD, lbs/d - Monthly Avg.	**338**	**338**
BOD, lbs/d - Daily Max.	**411**	**411**
TSS, mg/l - Daily Max.	**250**	**250**
TSS, lbs/d - Monthly Avg.	**352**	**352**
TSS, lbs/d - Daily Max.	**428**	**428**
NH_3 -N, mg/l - Monthly Avg.	**Removed 2000-2005 Permit**	**Removed 2000-2005 Permit**
NH_3 -N, lbs/d - Monthly Avg.	**Removed 2000-2005 Permit**	**Removed 2000-2005 Permit**
NH_3 -N, lbs/d - Daily Max.	**Removed 2000-2005 Permit**	**Removed 2000-2005 Permit**

Effluent Limits for Outfall 001 and Outfall 003 Metals		
Parameter	**Existing Effluent Limit For Combined Outfalls**	**New Effluent Limit For Combined Outfalls**
Arsenic, mg/l, Daily Max.	**0.10**	**0.10**
Arsenic, lbs/d - Monthly Avg.	**0.14**	**0.14**
Arsenic, lbs/d - Daily Max.	**0.17**	**0.17**
Cadmium, mg/l, Daily Max.	**0.32**	**0.32**
Cadmium, lbs/d - Monthly Avg.	**0.45**	**0.45**
Cadmium, lbs/d - Daily Max.	**0.55**	**0.55**
Chromium, mg/l - Daily Max.	**1.74**	**1.74**
Chromium, lbs/d - Monthly Avg.	**2.45**	**2.45**
Chromium, lbs/d - Daily Max.	**2.98**	**2.98**
Copper, mg/l - Daily Max.	**1.30**	**1.30**
Copper, lbs/d - Monthly Avg.	**1.83**	**1.83**

Effluent Limits for Outfall 001 and Outfall 003 Metals (Continued)		
Parameter	**Existing Effluent Limit For Combined Outfalls**	**New Effluent Limit For Combined Outfalls**
Copper, lbs/d - Daily Max.	**2.22**	**2.22**
Cyanide, mg/l - Daily Max.	**0.22**	**0.22**
Cyanide, lbs/d - Monthly Avg.	**0.31**	**0.31**
Cyanide, lbs/d - Daily Max.	**0.38**	**0.38**
Lead, mg/l - Daily Max.	**0.37**	**0.37**
Lead, lbs/d - Monthly Avg.	**0.52**	**0.52**
Lead, lbs/d - Daily Max.	**0.63**	**0.63**
Mercury, mg/l - Daily Max.	**0.02**	**0.02**
Mercury, lbs/d - Monthly Avg.	**0.02**	**0.02**
Mercury, lbs/d - Daily Max.	**0.03**	**0.03**
Molybdenum, mg/l - Daily Max.	**0.07**	**0.07**
Molybdenum, lbs/d - Monthly Avg.	**0.10**	**0.10**
Molybdenum, lbs/d - Daily Max.	**0.12**	**0.12**
Nickel, mg/l	**2.32**	**2.32**
Nickel, lbs/d - Monthly Avg.	**3.26**	**3.26**
Nickel, lbs/d - Daily Max.	**3.97**	**3.97**
Selenium, mg/l - Daily Max.	**0.04**	**0.04**
Selenium, lbs/d - Monthly Avg.	**0.06**	**0.06**
Selenium, lbs/d - Daily Max.	**0.07**	**0.07**

Effluent Limits for Outfall 001 and Outfall 003 Metals (Continued)		
Silver, mg/l - Daily Max.	**0.20**	**0.20**
Silver, lbs/d - Monthly Avg.	**0.28**	**0.28**
Silver, lbs/d - Daily Max.	**0.34**	**0.34**
Zinc, mg/l - Daily Max.	**1.04**	**1.04**
Zinc, lbs/d - Monthly Avg.	**1.46**	**1.46**
Zinc, lbs/d - Daily Max.	**1.78**	**1.78**

References

1989. EPA Industrial User Permitting Guidance Manual. Environmental Protection Agency (EPA), Office of Water, EN-336

1989. Development and Implementation of Local Discharge Limitations Under the Pretreatment Program. EPA, Office of Water Enforcement and Permits

1991. Supplemental Manual on the Development of Local Discharge Limitations Under the Pretreatment Program. EPA Office of Water, EN-336, 21W-4002.

1998. Fact Sheet for NPDES Permit - Richland Wastewater Treatment Plant. Washington State Department of Ecology, Permit NO. WA-002041-9.

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1	Cover Sheet	Address		Address for Battelle Memorial Institute should be revised as follows: "MSIN ~~P7-79~~ **J2-25**"
				Address corrected. It is Battelle's responsibility to ensure that the address on file with the City is current.
1	Cover Sheet	Application for Renewal Requirements	Last Paragraph	This paragraph states that an application for a renewal permit must be submitted a minimum of 90 days prior to the expiration date of the permit per the requirements of the City of Richland Pretreatment Act – Chapter 17.30, Part 3, Section 3.14. However, this wording conflicts with Part IV, Section O of the permit, which states that an application for a renewal permit is due within 90 days of the notification sent by the City. Because of the potential variability of when the City's notification is sent, these two dates may vary – as was the case during this permit renewal cycle. Suggest standardizing the wording in Section O to match that of the Ordinance as follows: ***O. DUTY TO REAPPLY*** The City shall notify the permittee 180 days prior to the expiration date of the permittee's permit. ~~Within 90 days of the notification, the~~ The permittee shall reapply for reissuance of the permit **a minimum of 90 days prior to the expiration date of the permit** on a form provided by the City.
				The City agrees and does not see any conflicts. Modifications made accordingly.
2	Table of Contents			Looks like the Table of Contents may have been unintentionally deleted. Suggest updating the Table of Contents to match the revised permit and page numbering.
				The Table of Contents was intentionally lined out, but left in the document until the permit was finalized and page numbers no longer changed. The Table of Contents would not be visible and lined out if it were "unintentionally deleted."
3	Part I	Section A	Outfall 007	Outfall 007, as stated in the fact sheet, has not been established in previous

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				permits, has minimal impact to the City sewer, minimal discharges, and currently has no means of measurement. It's inclusion in the fact sheet is recognition by both Battelle and the City of its presence, but it should be deleted from the permit.
				The permit has been modified to include Outfall 007 officially. It is now established. If an Outfall is present it is required to be identified. "Has not been established" was removed. Currently Battelle is required to monitor all Outfalls other than Outfall 001 and 003 for flow only.
5	Part 1	Section A	Outfall 007	Outfall 007 has not been included here. See previous comment regarding deletion of Outfall 007 from the permit.
				See previous response.
5	Part I	Section A	Note:	As related to our comment to delete monitoring requirements for Outfalls 002, 004, 005, and 006 (see comment for page 11 of the permit) suggest amending the Note: for this section to match current permit language as follows: Note: Historical data listed for Outfall 002, 0utfall 004, Outfall 005, and Outfall 006; indicate the buildings consist mainly of restrooms, office space, and few laboratories. **Discharges from these facilities will be regulated, but individual monitoring requirements shall not be required at this time.**
				The City agrees, with language in respect to flow monitoring added per Part II B, Permit CR-IU001.
5	Part I	Section B	Table, Effluent Limits for Outfalls 001 & 003	Suggest centering headers for this table as done in the table continued on page 6.
				No comment.
6	Part I	Section B	Table, Effluent Limits for Outfalls 001 & 003	The draft permit has established new effluent limitations for BOD, TSS, and metals at Outfalls 001 and 003 that are based on the five-year average flow rate. While this flow rate is reflective of the average data, we believe that this does not allow us the necessary flexibility we need. This flexibility is necessary to accommodate fluctuations in the flow rate due to the nature of our work in research and development.

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				We request that the effluent limits be based on the flow rate used to calculate the existing effluent limits. The flow rate used to calculate the existing effluent limits was 205,149 gallons per day. Our continued efforts to reduce noncontact cooling water discharges to the City of Richland sanitary sewer system have resulted in obvious reduction of wastewater flows but did not influence the pollutant loading on the wastestreams.
				The City has considered this and agrees that for the time being the limits will be retained. However, any unused capacity may be re-assigned as needed by the City. No adverse impacts have been realized from the current limits at the City of Richland WWTP.
6	Part I	Section B	Table, Effluent Limits for Outfalls 001 & 003	The sentence above the table states, "During the period the permit is effective, the discharge from combined outfalls shall not exceed the following effluent limitations:" In the Fact Sheet on page 18, column 3, the title of the column states, "New Effluent Limit at Each Outfall" Fact Sheet should be revised to reflect limits apply to combined outfalls.
				Done.
6	Part I	Section B	Notes: 2.	Suggest aligning text in Note No. 2 to match left tab.
				Done.
7	Part I	Section C	Discharge Prohibition No. 2	This appears to be a shortened version of the discharge prohibition from the Pretreatment Act. Please revise to match current language in City of Richland Pretreatment Act – Chapter 17.30, Part 2, Section 2.1.B(2).
				OK.
7	Part I	Section C	Discharge Prohibition No. 6	City of Richland Pretreatment Act Part 2, Section 2.4 discusses FOG limits of 100 mg/l. How does this limit play into the permit and discharge prohibition #6 regarding oils?

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				Above 100mg/l discharge strength, there is the potential of causing interference or pass-through at the WWTP. Not one, but many of the general prohibitions would come into play.
8	Part I	Section C	Specific Prohibitions 12. and 14.	As discussed in Appendix 8 of the Permit Application (Sections 8.1.A and 8.1.B), Prohibition Number 12 prohibits the discharge of certain types of clean water discharges and Prohibition Number 14 prohibits the discharge of medical waste unless "specifically authorized by the Public Works Director." As described during the permit application process, annual inspections and other reporting, small quantities of these types of waste streams are present in the process wastewater discharged from Battelle facilities. It is requested that a footnote be added to Prohibitions 12 and 14 to acknowledge that small discharges of these waste streams are authorized by the City. This change has already been incorporated into Battelle's other permits for EMSL and APEL. Suggest changing the text as follows (see EMSL and APEL permits): 12. Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, non-contact cooling water and unpolluted wastewater, unless specifically authorized by the Public Works Director.[(1)] 14. Medical wastes as isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes and dialysis wastes.[(2)] **[(1)] Note: Limited quantities of deionized water, non-contact cooling water, condensate, and unpolluted wastewater have been authorized by the Public Works Director.** **[(2)] Note: Discharge of biological research materials that have been chemically disinfected or sterilized via autoclave have been authorized by the Public Works Director.**

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				The City acknowledges that prohibition 12 was footnoted previously, and will do so in this permit. As a general policy, the City will not footnote boilerplate language taken from the general pretreatment regulations. Request for footnote to prohibition 14 is denied. For both of these specific prohibitions, and others contained within Permit CR-IU001, the State requires in the City's NPDES permit (as does Battelle's fact sheet) the use of AKART. The sewer should be the LAST choice for disposal.
9	Part I	Section C	Discharge Prohibition No. 22	Please revise the text of Discharge Prohibition #22 to match the current language in City of Richland Pretreatment Act – Chapter 17.30, Part 2, Section 2.1.B(22).
				OK.
10	Part II	Section A	Table – Outfall 001 and 003 Monitoring Requirements	The method of collecting, analyzing, and reporting pH is included in the "grab composite" note #4 and not the "grab" note #3. Need to revise Notes #3 and #4 to make clear what type of sample is required for pH. Suggest the following: 3. A "Grab" sample is an individual sample collected in less than 15 minutes, without regard for time or flow. Grab samples will be collected during business hours. **Grab samples for pH need to be analyzed individually, immediately, and the results combined for reporting (e.g., average of the 4 results during the day).** 4. Grab composites – a minimum of four (4) grab samples must be used for pH, cyanide and total phenols in accordance with 40 CFR 403.12(5)(iii) – (vi). ~~Grab samples for pH need to be analyzed individually, immediately, and the results combined for reporting (e.g., average of the 4 results during the day).~~
				Note #4 was modified to reflect the Federal language of 403.12(5)(iii)-(vi). No other clarification needed in the permit.

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Page No.	**Part**	**Section**	**Location**	**Comment**
10	Part II	Section A	Table – Outfall 001 and 003 Monitoring Requirements	The entry for BOD, under the "Parameter" and "Sample Point" headings appears to have been inadvertently cut off. Suggest amending text as follows: "**Biochemical Oxygen** Demand (5 day BOD)" mg/L **Effluent**
				Noted and changes made accordingly.
10	Part II	Section A	Table – Outfall 001 and 003 Monitoring Requirements	The "Type of Sample" for Total Phenols is listed as a 24HC, but we believe it should be a **grab composite**.
				Typo corrected. It is a mandatory 4 grab samples that may be composited in the lab per the City's NPDES permit instructions.
10	Part II	Section A	Table – Outfall 001 and 003 Monitoring Requirements	The "Type of Sample" for Priority Pollutants is (strictly speaking) not a 24HC for all samples. Volatile Organics (VOAs) are sampled via a grab. Suggest modifying to indicate either 24HC or grab (as appropriate) or you could reference Note #6 from this section.
				See above.
10	Part II	Section A	Table – Outfall 001 and 003 Monitoring Requirements	Two format suggestions for the table that are minor in nature: o Suggest adding in column borders throughout the table (as done with other tables in the permit). o Suggest deleting extra line in the row for Lead to make table more uniform.
				OK.
11	Part II	Section B	Table – Monitoring Requirements for Outfalls 002, 004, 005, 006, and 007	We request that Section B be revised to state that flow measurements be taken at Outfalls 002, 004, 005, 006, and 007 once per year during the month of anticipated peak flows. If a flow measurement cannot be obtained, the permittee will provide an estimate of flow using a verifiable technique, such as verification of process wastestreams and process wastestream volumes, as determined appropriate by the City of Richland. The predominant discharge to the City sewer from these outfalls for the past 13 years has been sanitary water (e.g., restrooms, lunchrooms) as indicated in previous permits and verified via annual inspections by the City. The number of office staff located in these facilities substantiates this claim as well as the

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				small number of laboratory spaces and/or wet chemistry spaces present. Battelle has provided supplemental information to the City regarding the discharges from Outfalls 004, 005, and 006. This information provides an estimate of both Process and Sanitary discharges to the sewer and confirms that process water discharges are very low. It also confirms that the major water use at Outfalls 004, 005, and 006 is irrigation water.
				The City has made appropriate modifications.
12	Part II	Section B	Notes: No. 9, Last sentence.	Note # 9 should be amended to delete reference to Outfall 002 for reporting combined mass loadings as follows: 9. The permittee shall perform…Mass loadings shall be calculated and reported for combined discharges of Outfalls 001~~, 002,~~ and 003.
				Done.
13	Part III	Summary Table	Reporting Requirements, Part III, Section B	Part III, Section B of the permit (Notification of Violation) does not include text describing the requirement to follow up verbal notification with a written report within 5 days. Suggest including this requirement in this section.
				Language modified.
14	Part III	Summary Table	Reporting Requirements	Suggest deleting blank row at the top of the table (as continued from previous page).
				Done.
14	Part III	Summary Table	Reporting Requirements for Part V, Section G	The reporting requirements in Part V, Section G, "Proper Operation and Maintenance" do not appear to match those listed here in the table for "Engineering Report". Suggest revising either the table or text in the permit as necessary. Also see additional comment on Section G below (page 18).
				Modified to reflect applicable section of Ordinance under Section 3.3.
14	Part III	Summary Table	Reporting Requirements for Part V,	Please confirm Reporting Frequency and First Submittal Date regarding the application for permit renewal. Should this be as follows:

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Page No.	**Part**	**Section**	**Location**	**Comment**
			Section O	~~180~~ **90** Days Prior to Permit Expiration **Date???**
				Done.
14	Part III	Section A	Reporting of Monitoring Results	As requested in Appendix 8 of the permit application, and similar to existing language in our EMSL and APEL permits, suggest modifying the language in this section of the permit to allow for an additional 30 days to report metals and organics results. This change would give Battelle increased operational flexibility in scheduling sampling events and preparing discharge monitoring reports and would have no effect on the sampling and monitoring as required in the permit (e.g., only affects reporting of results.) "Monitoring results in Part II of this permit shall be summarized each calendar quarter (i.e. once for the first 3 months of the year, once for the second 3 months of the year) on a Discharge Monitoring Report form. The reports shall be postmarked by the 15th of the first month following each quarter. **An additional 30 days will be allowed for submittal of metal and organic analyses reports.** In the event that additional monitoring is conducted, all results shall be contained in the report..."
				Denied. Battelle has been given more than adequate time with the change to quarterly reporting. The City suggests performing this testing early in each quarter. The City is required to publish those in SNC after DMR's are received Jan 15th, the request has the potential to interfere with this task.
18	Part IV	Section A	ASPP, Second through fourth paragraphs	If possible, please provide further definition for what constitutes a "concentrated process tank solution" in this section. As an R&D facility, Battelle does not often have concentrated process tank solutions and it is not clear how this requirement might apply to them. Perhaps a footnote (similar to the following comment) could be added along the lines of the following: (1) **For the purpose of this permit, the term concentrated process tank solution will refer to an area where a large amount of concentrated chemical material is stored prior to distribution or use in the laboratories.**
				This language is standard in the City's permits. Self-

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				explanatory.
18	Part IV	Section A	ASPP, Sixth paragraph, "Chemicals stored..."	This paragraph was footnoted in previous permits (see permit issued August 1992, page 19) to provide clarification about what constitutes "bulk" chemicals. Suggest adding this footnote back in as follows to help clarify compliance and modify requirement to match R&D operations: "Chemicals stored in bulk[(2)] chemical storage buildings shall be stored..." [(2)] **For the purpose of this permit, the term bulk chemical storage area will refer to an area where a large amount of chemical material is stored prior to distribution or use into the laboratories.**
				This issue was addressed in Battelle's comments in 1999 to reflect the language requested by Battelle. No further clarification required.
22	Part IV	Section G	First paragraph	This section seems to be outdated and unclear. It appears to refer to specific equipment or actions taken to pretreat wastewater prior to discharge to the sewer, but then mentions "administrative measures". Suggest revising this first paragraph to be more specific to Battelle operations or amending language to be more specific to maintaining proper maintenance of facilities and operations
				The City believes Battelle is referring to Part V, not Part IV as listed. The City understands Battelle has no "pretreatment equipment" per se, however the paragraph is more than adequate to encapsulate Battelle's operations. The City believes Battelle specifically requested this particular language in a prior permit cycle (try 1992).
22	Part IV	Section G	Second paragraph, Last sentence	The last sentence appears to have been cut short. It reads, "In addition, the following practices shall be used:" and then it goes into section H - Dilution. Suggest deleting or amending as necessary.
				Deleted. Unintentionally left in draft permit.
25	Part V	Section O		As discussed earlier, the language in this section conflicts with that of City of Richland Pretreatment Act – Chapter 17.30, Part 3, Section 3.14, which requires application for permit renewal within 90 days of the permit expiration

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				date (rather than the City's notification letter date).

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				See previous responses.
1	Permittee:	Address		Mailstop is incorrect in address for Battelle. Should change from "P7-79" to "**J2-25**"
				Address corrected. It is Battelle's responsibility to ensure that the address on file with the City is current.
2	Description of Facility		Last sentence	Suggest changing the point of contact to "Director, Environment, Safety, **Health & Quality**" to reflect organizational changes within Battelle.
				Done.
2	Description of Outfalls	Bulleted Note	Below Outfall 003 description	Suggest changing as follows "The following outfalls have not been monitored ~~on a daily basis during the last permit cycle~~ **since issuance of the permit in 1992. The primary source of wastewater entering these outfalls is sanitary waste**".
				The desired wording was removed. The last sentence will not be added, as it is unnecessarily repetitive. This information is clearly presented in the individual outfall descriptions.
3	Description of Operations		First Paragraph	Suggest updating the description of operations based on what was submitted in the permit application. Battelle Memorial Institute performs scientific research and development (R&D) on physical, chemical, radiological, and biological processes at these facilities in Richland. A portion of these activities involves laboratory work using a variety of chemicals depending on the nature of the research activity. In most instances, these chemicals are used in very small quantities. No toxic or hazardous chemicals in quantities or concentrations that would be harmful to the City of Richland's sewage treatment facility or workers are discharged to the sewer system. A portion of these activities also involves laboratory work using biological materials (e.g., bacteria, proteins, viruses). All biological wastes are sterilized using an autoclave or chemically disinfected prior to discharge to the sewer. A portion of this work also involves the discharge of limited quantities of deionized water, non-contact cooling water, condensate, and unpolluted wastewater. The wastewater generated from Battelle facilities is primarily from equipment cooling and activities that parallel typical sanitary

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				sewer discharges.
				Language accepted except for "No toxic or hazardous chemicals in quantities or concentrations that would be harmful to the City of Richland's sewage treatment facility or workers are discharged to the sewer system." The permit, data collected from discharge reports, and Battelle's compliance with the permit conditions determine the validity of this statement. The City will not include this blanket statement.
3	Description of Operations	Environmental Permits issued to Battelle	RCRA ID Numbers	Suggest changing the name of the first RCRA ID number as follows (per the permit application): o ~~Research Technology Laboratory~~ **Battelle** (WAD004492575)
				OK.
3	Discharge Information		Fifth sentence	"All flows were over the 5-year period of January 2000, through **September** ~~December~~ 2004."
				OK.
4	Table – Conventional Pollutants			Suggest changing the header of each table to reflect that data were from January 2000 – **September** ~~December~~ 2004.
				OK.
4	Table – Conventional Pollutants	pH, 5-year Max	Outfall 002	Appendix 7 of the permit application presents no data for Outfall 002. I suspect that the pH here of **8.44** is an error and should be deleted. We have not monitored 002 for some time.
				The data is from 6/17/03 compliance monitoring performed by the City.
4	Table – Conventional Pollutants	BOD		Should the combined discharge be the sum of the average values for Outfalls 001 and 003 as follows: BOD, mg/l 51 <7.5 ~~<27~~**<58.5**

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				5-yr Ave
				Concentration for combined outfalls removed from table. The City feels that it would not be appropriate to represent the data in this fashion without taking flow into consideration.
4	Table – Conventional Pollutants	TSS		Should the combined discharge be the sum of the average values for Outfalls 001 and 003 as follows: TSS, mg/l 64 <16 ~~<36~~**<80** 5-yr Ave
				See previous.
5 & 6	Table – Metals	Mercury		The entry for mercury may have some errors and does not appear to follow the formatting of the other metals: mg/l, 5-yr Ave <0.027 <0.027 ~~<0.0001~~ lbs/day, 5-yr Ave. <0.0001 lbs/day, 5-yr Max ~~<0.2~~ ~~<0.2~~ <0.00022
				Corrected as needed. Information derived from Battelle's permit application.
6	Table – Metals	Zinc		The entry for zinc may have some errors and does not appear to follow the formatting of the other metals: mg/l, 5-yr Ave 0.054 <0.046 ~~0.0.040~~ lbs/day, 5-yr Ave. ~~<0.0001~~**0.040** lbs/day, 5-yr Max ~~<0.2~~ ~~<0.2~~ <0.00022
				Corrected as needed. Information derived from Battelle's permit application.
6	Table – Metals	Cadmium		The entry for cadmium should be revised as follows: mg/l, 5-yr Ave ~~<0.0003~~ **<0.003** ~~<0.0003~~ **<0.003**

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				Done.
7	Table – Metals	Silver		The entry for silver should be revised as follows: mg/l, 5-yr Ave <0.004 ~~<0.005~~ **<0.004**
				Done.
11	Basis for Permit Limits	Effluent Limits	No. 4, last sentence	Delete reference to Outfall 002 in this sentence.
				Done.
13	Monitoring Requirements for Outfalls 001 and 003		No. 2	Suggest changing to "pH monitoring will be ~~once a week to quarterly sampling~~ **performed twice a year**" and revise subsequent language to match.
				Language fixed, but sampling is quarterly, not as stated above.
13	Monitoring Requirements for Outfalls 001 and 003		No. 3	Suggest changing to **"BOD and TSS monitoring will remain at once per year"**
				Done.
13	Monitoring Requirements for Outfalls 001 and 003		No. 5	Previous permits have not required a grab composite for VOAs, but rather a straight grab. Although 40 CFR 403.12(5)(iii-v) indicates it is required, EPA has provided some further guidance that VOA composite grabs are not always appropriate. Suggest deleting reference to VOAs as a grab composite and retain as a simple grab (one-time). This will match the language in the permit which only requires grab composites for total phenols and total cyanide.
				This language contained in the draft fact sheet had not been modified from the previous fact sheet. The City did modify the section for this fact sheet, to better reflect the language contained in 40 CFR 403.12 after reading this comment. Battelle should be taking Four

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				(4) grab samples and having the laboratory composite them per procedure. The City's current NPDES permit contains instructions.
14	Monitoring Requirements for Outfalls 002, 004, 005, 006 and 007		First paragraph	The Annex facility is no longer vacant, but now houses a few office staff from our Facilities and Operations division. (<10).
				Done.
14	Monitoring Requirements for Outfalls 002, 004, 005, 006 and 007			As discussed in comments for page 11 of the permit, we request that monitoring requirements for Outfalls 002, 004, 005, 006, and 007 be removed from the permit and fact sheet. The predominant discharge to the City sewer from these outfalls for the past 13 years has been sanitary water (e.g., restrooms, lunchrooms) as indicated in previous permits and verified via annual inspections by the City. The number of office staff located in these facilities substantiates this claim as well as the small number of laboratory spaces and/or wet chemistry spaces present. Battelle has provided supplemental information to the City regarding the discharges from Outfalls 004, 005, and 006. This information provides an estimate of both Process and Sanitary discharges to the sewer and confirms that process water discharges are very low. It also confirms that the major water use at Outfalls 004, 005, and 006 is irrigation water.
				Previous comments do not match this statement. To comply with the ordinance, a permit holder is required to measure flow with "verifiable" means unless it is determined by the City that it is not feasible to do so. This applies to all outfalls, primarily sanitary flow or not.
14	Annual Drainage of Cooling Ponds for Spring Maintenance			This paragraph should be updated to reflect the current operation and status of the ROB Cooling Ponds. Suggest modifying text as follows: Since March 18, 1998, Battelle has ceased draining the cooling ponds, located north of the Research Operations Building, to the City of Richland Sanitary Sewer during annual Spring cleaning. Battelle has applied for and received a permit from the Washington State Department of Ecology for the discharge of cooling pond water to the ground. The City does allow the rinsate from pond

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				cleaning activities to be discharged as long as a minimum amount of water is used. Notification requirements will still be required. Based on historical data, the cooling water has a neutral pH range, and pH-monitoring requirements will not be necessary.
				Done.
15	Special Conditions in the Permit	Text located in box	Second and third paragraphs	Suggest deleting the two paragraphs discussing the RRC Cooling Ponds as they are irrelevant to the discussion of the reduction of non-contact cooling water discharges and the Compliance Order. Battelle has not discharged non-contact cooling pond water to the City sewer for almost 7 years.
				No. This information will be deleted when Battelle fulfils all of the obligations specified within the original compliance order. The compliance order will not be modified piecemeal.
18	Effluent Limits for Outfall 001 and Outfall 003 Conventional Pollutants	Table	3rd Column	The title of this column is "New Effluent Limit at Each Outfall." The Permit, page 6, states, "During the period the permit is effective, the discharge from combined outfalls shall not exceed the following effluent limitations:" Need to change the Fact Sheet to reflect effluent limitations are for combined outfalls.
				Done.